File

9/20/96

DP Barcode : D228684
PC Code No : 128857
EEB Out :

SEP 20 1996

To: Rob Forrest
Product Manager 41
Registration Division (7505C)

From: Anthony F. Maciorowski, Chief
Ecological Effects Branch/EFED (7507C)

Attached, please find the EEB review of...

Reg./File # : 96CA0038
Chemical Name : Myclobutanil
Type Product : Fungicide
Product Name : Rally 40W
Company Name : California Dept. of Food and Agriculture
Purpose : Proposed Section 18 for use on cucurbits to control Powdery mildew.

Action Code : 510 Date Due : 09/30/96
Scientist : A. Vaughan Date In : 09/11/96

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)			72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)			123-2		
71-5(B)			72-4(A)			124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)			72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)						141-5		

Y=Acceptable (Study satisfied Guideline)/Concur
P=Partial (Study partially fulfilled Guideline but additional information is needed
S=Supplemental (Study provided useful information but Guideline was not satisfied)
N=Unacceptable (Study was rejected)/Nonconcur

2014103

DP BARCODE: D228684

CASE: 288007 DATA PACKAGE RECORD DATE: 09/10/96
SUBMISSION: S509410 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: EMERGENCY EXEMP ACTION: 510 SEC18-OC F/F USE
RANKING : 0 POINTS ()
CHEMICALS: 128857 Myclobutanil (ANSI) %

ID#: 96CA0038
COMPANY:
PRODUCT MANAGER: 41 ROBERT FORREST 703-305-6600 ROOM: CM2 219
PM TEAM REVIEWER: DAVID DEEGAN 703-308-8327 ROOM: CS1 6-W28
RECEIVED DATE: 08/06/96 DUE OUT DATE: 09/25/96

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 228684 EXPEDITE: N DATE SENT: 09/10/96 DATE RET.: / /
CHEMICAL: 128857 Myclobutanil (ANSI)
DP TYPE: 001 Submission Related Data Package
CSF: N LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	9/11/96	/ /
BRAN: EEB	9/11/96	/ /
SECT:	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

ADMIN DUE DATE: 09/30/96
NEGOT DATE: / /
PROJ DATE: / /

* * * DATA REVIEW INSTRUCTIONS * * *

Please review this section 18 request from California to use myclobutanil on cucurbits. Please indicate if exposure to non-target organisms is a concern, including for Federally-listed species. If I can answer any questions for you, please don't hesitate to contact me at 308-8327.

Dave Deegan

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
228681	BAB	09/10/96	09/30/96	Y	N	Y
228682	EAB	09/10/96	09/30/96	Y	N	Y
228683	RCAB/PIRAT	09/10/96	09/30/96	Y	N	Y

ECOLOGICAL EFFECTS BRANCH REVIEW

Chemical: Myclobutanil (Rally 40W)

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The California Department of Pesticide Regulation has applied for an emergency exemption for Rally 40W (myclobutanil) fungicide to control powdery mildew on cucurbits. No new data were submitted with this request.

100.2 Formulation Information

Myclobutanil:a-butyl-a-(4-chlorophenyl)-1H-1,2,4-triazole-1-propane-nitrile. 40%
Inert Ingredients 60%

100.3 Application Methods, Directions, Rates (from label)

Applications should begin at first sign of disease development and continue on a 7 to 10 day schedule. Application rate is 4 oz product (0.1 lb ai) per acre. Users are limited to 6 applications per season. Applications may be made by air or ground. All applicable directions, restrictions and precautions on the EPA registered label are to be followed.

100.4 Target Organisms

Powdery mildew, (Sphaerotheca fuliginea)

100.5 Precautionary Labeling

Product Label

For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift or runoff from areas treated.

101 Hazard Assessment

101.1 Discussion

The proposed exemption would allow use of myclobutanil on 55,000 acres of cucurbits in the following counties: Colusa, Fresno, Kern, Merced, San Joaquin, Stanislaus, Sutter, Yolo, and Yuba. Exemption period is July 26, 1996 through July 25, 1997.

101.2 Likelihood of Adverse Effects on Nontarget Organisms

Environmental Fate Data:

- Stable to hydrolysis at pH 5, 7, and 9

- Stable to photolysis in water
- Photolytic soil half-life = 143 days
- Aerobic soil half-life = 66 days
- Anaerobic soil half-life = no degradation at 62 days
- solubility = 142 ppm
- Leaching: myclobutanil is moderately mobile (K_ds = 1.46 - 9.77 for adsorption and 0.47 - 4.18 for desorption in 5 soils). K_{oc} = 112. The degradate is considered highly mobile.
- Bioaccumulation: Fish bioaccumulation study was waived. Myclobutanil is not expected to bioaccumulate.

The major route of dissipation is believed to be diffusion and dilution; myclobutanil appears to be resistant to most environmental breakdown processes.

Toxicity Data
Terrestrial Species

BIRDS: Ecological effects avian toxicity data for myclobutanil are as follows:

Species	Study Type	% a.i.	Results	Status
Bobwhite	Acute oral LD_{50}	84.5	510 mg/kg	Core
Bobwhite	Dietary LC_{50}	84.5	>5000 ppm	Core
Mallard	Dietary LC_{50}	84.5	>5000 ppm	Core
Bobwhite	Reproduction	94.2	NOEC=260ppm	Supplemental
Mallard	Reproduction	94.2	NOEC=260ppm	Supplemental

Myclobutanil is slightly toxic to birds on an acute basis, and practically non-toxic to birds on a sub-acute (dietary) basis.

MAMMALS: Mammalian toxicity data for myclobutanil is as follows:

Species	Test type	% a.i.	Results	Status
rat	acute oral	91.9	LD_{50}=1360 g/kg	core
rat	2-gen. repro.	84.5	Repro NOEL = 200 ppm, LOEL = 1000 ppm	core

rat	2-gen repro.	84.5	systemic NOEL = 50 ppm, LOEL = 200 ppm	core

Myclobutanil is slightly toxic to mammals on an acute basis.

Aquatic Species

Aquatic toxicity data for myclobutanil is as follows:

Species	Test type	% a.i.	Results	Status
Bluegill sunfish	96-hr acute	84.5	LC_{50}=2.4 ppm	core
Rainbow trout	96-hr acute	84.5	LC_{50}=4.2 ppm	core
Daphnid	48-hr acute	84.5	EC_{50}= 11 ppm	core
Sheepshead minnow	96-hr acute	93	LC_{50} = 4.7 ppm	core
Eastern oyster	96-hr acute	93	EC_{50}= 0.68 ppm	supplemental
Mysid	96-hr acute	93	LC_{50}=0.24 ppm	core
Fathead minnow	Early life stage		NOEC = 0.98 ppm, LOEC = 2.2 ppm	supplemental

Myclobutanil is moderately toxic to freshwater fish and invertebrates, moderately toxic to marine fish, and highly toxic to marine invertebrates on an acute basis.

Exposure Data and Risk Quotients (RQs)

Acute terrestrial exposure estimates were made using the Kenaga nomograph. Values were derived based on the maximum label rate per acre per application (0.1 lb a.i./A). Values were also calculated for 6 applications at 0.1 lb ai/A on a 7-day application interval using the FATE program. Values presented below are the maximum estimated residues for various vegetation types. RQ values were derived by dividing the estimated exposure by the LC_{50} value. RQs greater than 0.5 exceed the Agency's Level-of-Concern (LOC) for high risk; values greater than 0.2 indicate a risk which may be reduced if mitigation measures are instituted; values greater than 0.1

exceed the LOC for endangered species.

Chronic risk was assessed using the residues generated by the FATE program and comparing them to the available avian reproduction data. An RQ greater than 1 exceeds the Agency's LOC for high risk. The printout for the FATE program is attached at the end of this review.

Vegetation Type	Max. Kenaga value (0.1 lb ai/A)	Acute RQ	Max. FATE EEC (6 appl., total of 0.6 lb ai/A)	Chronic RQ
Short Grass	24 ppm	0.005	119 ppm	0.458
Long Grass	11 ppm	0.002		
Leaves/leafy crops	12.5 ppm	0.003		
Forage/Insects	5.8 ppm	0.001		

There were no LOC exceedances for avian species from the proposed use of myclobutanil. This use is not expected to cause concern for avian species.

Terrestrial Species-Mammals

Acute: Based on acute LD_{50} values, mammals are less sensitive than birds to myclobutanil. Since acute risk to birds is not expected from the proposed use of myclobutanil, acute risk to mammals is not expected.

Chronic: Maximum residues calculated via the FATE program are lower than reproductive NOECs for mammalian species. Therefore, reproductive risk is not expected for the proposed use of myclobutanil.

Aquatic Organisms

Exposure estimates (EECs) and RQs

The aquatic EECs presented below were generated using the GENEEC computer program developed by EFGWB. This program uses a variety of environmental fate parameters in conjunction with the application rate to estimate the exposure to aquatic organisms from runoff. The maximum total application rate (0.6 lb a.i./A) was used in this program, since little degradation would occur during the 7-day application interval for multiple applications. The printout from this program is attached at the end of this review.

Acute RQs were derived by dividing the instantaneous EEC by the LC or EC_{50} value for each species. The Agency's LOC for high-risk is exceeded if the RQ value is greater than 0.5. Values of 0.2 and higher indicate risk that may be reduced if mitigation measures are instituted, and values greater than 0.05 exceed the LOC for endangered species.

Chronic RQs were derived by dividing the appropriate EEC by

the NOEC obtained in chronic tests. The 21-day EEC is used for aquatic invertebrates, and the 56-day EEC is used for fish (using the early life-stage NOEC). Note that there is no acceptable chronic data available for invertebrates, so the chronic invertebrate RQ could not be generated for this risk assessment.

	EEC (ppb)	RQ
Instantaneous	24.1	Bluegill: 0.01 Trout: 0.01 Daphnid: 0.00 Shpshd. minnow: 0.01 Oyster: 0.04 Mysid: 0.10[1]
56-day	18.8	Fathead minnow: 0.02

[1]Exceeds the endangered species LOC

No high-risk LOCs were exceeded for the proposed use of myclobutanil. The mysid RQ exceeds the LOC for endangered species; however, as there are no endangered species of marine/estuarine invertebrates, this is not a concern.

Plants
Tier II Testing
Terrestrial
Tier II terrestrial plant testing is unavailable for myclobutanil.

Aquatic
Tier II aquatic plant data is available for *Selenastrum capricornutum* only. The *Selenastrum* EC_{50} value is 0.83 ppm. No adverse effects to aquatic plants are expected, based on this value.

Discussion of RQs/LOC exceedance
A. Effects on terrestrial organisms:
Acute
Based on the acute toxicity data, myclobutanil does not appear to pose an acute risk to avian or mammalian species from the proposed use.

Chronic
The proposed use of myclobutanil does not appear to pose a reproductive concern to birds or mammals.

B. Effects on aquatic organisms:
Acute
Fish: Based on the acute toxicity data, myclobutanil should not pose an acute concern to freshwater or marine/estuarine fish from the proposed use.

Invertebrates: The endangered species LOC was exceeded for

marine/estuarine invertebrates; however, exposure to this class of organisms is not expected from the proposed use. The proposed use of myclobutanil does not pose an acute concern to freshwater aquatic invertebrates.

Chronic
Fish: The proposed use of myclobutanil does not appear to pose a chronic risk to fish.

Invertebrates: Chronic risk to aquatic invertebrates could not be assessed at the present time due to a lack of data.

C. Effects on plants:
Terrestrial: A risk assessment for terrestrial plants could not be completed at this time due to a lack of data.

Aquatic: Based on the single aquatic plant species for which data was available, the proposed use of myclobutanil does not appear to pose a risk to aquatic plants.

101.3 Endangered Species Considerations
Risk to endangered species is not expected from the proposed use.

101.4 Adequacy of Toxicity Data
The available data were adequate to complete a risk assessment for this particular use.

101.5 Adequacy of Labeling
Environmental hazards labeling is adequate for use under this exemption.

102 Conclusions
EEB has reviewed the proposed emergency exemption for the use of myclobutanil on cucurbits in California. The use of myclobutanil as proposed is not expected to present risk to any nontarget organisms, including endangered species.

Allen W. Vaughan 9.19.96
Allen W. Vaughan, Entomologist
Ecological Effects Branch
EFED (7507C)

Daniel D. Rieder 9-20-96
Daniel D. Rieder, Acting Chief
Ecological Effects Branch
EFED (7507C)

Norman J. Cook 09-20-96
Norman J. Cook, Section Chief
Ecological Effects Branch
EFED (7507C)

DAILY ACCUMULATED PESTICIDE RESIDUES---MULTP. APPL.

Chemical name ----------	Myclobutanil
Initial concentration (ppm) -----	24
Half-life ----------	61
A number of application --------	6
Application interval ----------	7
Length of simulation (day) -----	50

DAY	RESIDUE (PPM)
0	24
1	23.72883
2	23.46073
3	23.19565
4	22.93357
5	22.67445
6	22.41825
7	46.16496
8	45.64335
9	45.12763
10	44.61775
11	44.11363
12	43.6152
13	43.1224
14	66.63517
15	65.88227
16	65.13789
17	64.40191
18	63.67425
19	62.95481
20	62.2435
21	85.54022
22	84.57372
23	83.61815
24	82.67336
25	81.73926
26	80.81571
27	79.90259
28	102.9998
29	101.836
30	100.6854
31	99.54778
32	98.42302
33	97.31097
34	96.21146
35	119.1244
36	117.7784
37	116.4477
38	115.132
39	113.8311
40	112.545
41	111.2734
42	110.0161
43	108.7731
44	107.5441
45	106.329
46	105.1276
47	103.9398
48	102.7654
49	101.6043
50	100.4562
Maximum residue ----------	119.1244
Average residue ----------	77.53551

RUN No. 1 FOR myclobutanil INPUT VALUES

RATE (#/AC) ONE (MULT)	APPLICATIONS NO. - INTERVAL	SOIL KOC	SOLUBILITY (PPM)	% SPRAY DRIFT	INCORP DEPTH (IN)
.100 (.600)	6 7	112.0	142.0	5.0	.0

FIELD AND STANDARD POND HALFLIFE VALUES (DAYS)

METABOLIC (FIELD)	DAYS UNTIL RAIN/RUNOFF	HYDROLYSIS (POND)	PHOTOLYSIS (POND-EFF)	METABOLIC (POND)	COMBINED (POND)
.00	0	90.00	90.00-11043.00	.00	89.27

GENERIC EECs (IN PPB)

PEAK GEEC	AVERAGE 4 DAY GEEC	AVERAGE 21 DAY GEEC	AVERAGE 56 DAY GEEC
24.14	23.80	21.95	18.84

TELEFAX TRANSMISSION

CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION

PESTICIDE REGISTRATION BRANCH
INFORMATION CENTER
TELEPHONE NO. (916) 445-4400
FAX NO. (916) 324-1719

DATE: August 19, 1996

TO: Robert Forrest
fax: (703) 308-8369

Amendment to the Section 18 request for Rally 40W (Myclobutanil) to control Powdery Mildew (Sphearotheca fuliginea) on Cucurbits.

FROM: Roberta Firoved
phone: (916) 324-3533

1 Pages to Follow

A4 to A4

California Environmental Protection Agency
James M. Strock, *Secretary for Environmental Protection*

State of California
Pete Wilson, *Governor*

DEPARTMENT OF PESTICIDE REGULATION
James W. Wells, *Director*
1020 N Street, Room 332
Sacramento, California 95814-5624

August 19, 1996

Mr. Robert Forrest (H7505W)
Emergency Response and Minor Use Section
Registration Support Branch
Registration Division, OPP
U.S. Environmental Protection Agency
401 M Street, S. W.
Washington, D.C. 20460

Dear Mr. Forrest:

Section 18 Emergency Exemption No. 96-22, Rally 40W Agricultural Fungicide in Water-Soluble Pouches (Myclobutanil)(EPA Reg. No. 707-215-AA)/ Cucurbits/ Powdery Mildew (*Sphaerotheca fuliginea*)

This is a request to add another County to the Section 18 Emergency Exemption without increasing the acreage. Including Kern County on the Section 18 label will not affect the total possible treated acres.

The California Department of Pesticide Regulation (CDPR), Pesticide Registration Branch, issued this Section 18 Emergency Exemption, effective July 26, 1996. Since the issuance of the Section 18 Emergency Exemption, CDPR has received a request to add Kern County to the Section 18. Kern County has approximately 350 acres of fresh market cucurbits in production until October 1996.

If you have any questions, please call me at the telephone number listed below. Thank you for your help with this exemption.

Sincerely,

Roberta L. Firoved

Roberta L. Firoved
Registration Specialist
Pesticide Registration Branch
(916) 324-3533

TELEFAX TRANSMISSION

CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION

PESTICIDE REGISTRATION BRANCH
INFORMATION CENTER
TELEPHONE NO. (916) 445-4400
FAX NO. (916) 324-1719

DATE: August 16, 1996

TO: Mr. Robert Forrest

FROM: Roberta Firoved
phone: (916) 324-3533

1 Page to Follow

PR-REG-025 (Rev. 1/94)

A4 to A4

California Environmental Protection Agency
James M. Strock, *Secretary for Environmental Protection*

State of California
Pete Wilson, *Governor*

DEPARTMENT OF PESTICIDE REGULATION
James W. Wells, *Director*
1020 N Street, Room 332
Sacramento, California 95814-5624

August 16, 1996

Mr. Robert Forrest (H7505W)
Emergency Response and Minor Use Section
Registration Support Branch
Registration Division, OPP
U.S. Environmental Protection Agency
401 M Street, S. W.
Washington, D.C. 20460

Dear Mr. Forrest:

Section 18 Emergency Exemption No. 96-22, Rally 40W Agricultural Fungicide in Water-Soluble Pouches (Myclobutanil)(EPA Reg. No. 707-215-AA)/ Cucurbits/ Powdery Mildew (*Sphaerotheca fuliginea*)

This is a request to add another County to the Section 18 Emergency Exemption without increasing the acreage. Including Colusa County on the Section 18 label will not affect the total possible treated acres.

The California Department of Pesticide Regulation (CDPR), Pesticide Registration Branch, issued this Section 18 Emergency Exemption, effective July 26, 1996. Since the issuance of the Section 18 Emergency Exemption, CDPR has received a request to add Colusa County to the Section 18. Colusa County has approximately 300 acres of fresh market watermelons grown next to Yolo County. CDPR included Yolo County on the Section 18 label.

If you have any questions, please call me at the telephone number listed below. Thank you for your help with this exemption.

Sincerely,

Roberta L. Firoved

Roberta L. Firoved
Registration Specialist
Pesticide Registration Branch
(916) 324-3533

California Environmental Protection Agency
James M. Strock, *Secretary for Environmental Protection*

State of California
Pete Wilson, *Governor*

DEPARTMENT OF PESTICIDE REGULATION
James W. Wells, *Director*
1020 N Street, Room 332
Sacramento, California 95814-5624

July 30, 1996

Mr. Robert Forrest (H7505C)
Emergency Response and Minor Use Section
Registration Support Branch
Registration Division/OPP
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D. C. 20460

Dear Mr. Forrest:

Section 18 Emergency Exemption Request -Rally 40W Agricultural Fungicide in Water Soluble Pouches/ Cucurbits/ Powdery Mildew(*Sphaerotheca fuliginea*)

The Department of Pesticide Regulation (DPR) requests a specific exemption to use Rally 40W Agricultural Fungicide in Water Soluble Pouches on cucurbits to control Powdery mildew (*Sphaerotheca fuliginea*). In addition, the Department requests an action level for cucurbits treated with this product. This emergency exemption is not intended to circumvent the Section 3 registration requirements, but to alleviate a critical pest problem where registered alternatives are not effective.

DPR originally issued a crisis Section 18 for watermelons. Since the issuance of the Section 18, the disease has spread to other cucurbit crops such as cucumbers, honeydew, and cantaloupes. Therefore a Section 18 for cucurbits may be more appropriate than targeting watermelon as a specific crop. DPR would like you to review this request using Rally 40W to mitigate the powdery mildew problem in cucurbits.

The justification for this emergency exemption request follows:

The Pest Problem

Powdery mildew (*Sphaerotheca fuliginea*) is a plant pathogenic fungus that is endemic in California watermelon crops. Powdery mildew was always considered to be a minor pest. However, over the past two years a new strain of powdery mildew has become an increasing problem for watermelon growers. Imperial and Riverside counties were severely impacted by the disease this last year. Unfortunately the Section 18 application was submitted, to the Department of Pesticide Regulation, too late in the season to be of benefit to these two counties. Last week the pest problem was discovered in seven central valley counties (Fresno, Merced, San Joaquin, Stanislaus, Sutter, Yolo, and Yuba) of California. It is estimated that a total of 50,000 acres are affected.

Several factors account for the apparent change in powdery mildew from a minor disease, in the past two years, into a critical disease situation this year. Environmental conditions attributed to the major

cause of the disease outbreak. This particular strain of powdery mildew is resistant to the product, Bayleton. Sulfur is an acceptable alternative. However, the use of Sulfur has a tendency to spot or burn the watermelon resulting in quality and yield loss. In addition, the odor associated with Sulfur products makes it difficult to manage near urban areas.

Due to the severity of the disease and the lack of effective registered alternatives a crisis was issued on July 26, 1996. Without an effective material such as myclobutanil, watermelon growers will suffer severe economic losses. For this reason, a Section 18 crisis was issued for the counties of Fresno, Merced, San Joaquin, Stanislaus, Sutter, Yolo, and Yuba.

The Pest

Powdery mildew (*Sphaerotheca fuliginea*) is a significant disease with yield losses between twenty and forty percent without effective control. The symptoms first appear as small white superficial spots on stems and leaves which after they enlarge become powdery in appearance. The lesions will increase in number and eventually cover the stems and both surfaces of the leaves. Severely infected leaves in turn become brown and desiccated and the plant will prematurely defoliate leaving the fruit exposed to sunburn. In addition, while the plants produce prematurely ripened fruit of poorer size and quality. The yield and quality losses depend upon the duration and severity of disease development.

The Crop

California produces two main crops of watermelons each year. The first crop, grown in the southern counties, is harvested around the 4th of July. The growing season in the central valley is from June through November. Watermelons are marketed fresh with the first harvest generally in early July and continuing until the first frost.

Alternative Control Measures

Producers and Pest Control Advisors (PCAs) have indicated that there are no viable products available for the control of *Sphaerotheca fuliginea* in watermelon crops. The current registered alternatives are either ineffective or present phytotoxic or other concerns that render them useless in the battle against this significant pathogen. The following is a list of current registered alternatives and a brief description of their utility. Trial information submitted in **Attachment B** will further document the efficacy of these and other alternatives such as Sulfur, Bayleton, Bravo, Reach, Benelate, Topsin, Bravo, Dithane, Panczeb, and Ridomil.

Sulfur: Sulfur provides effective control of *Spaerotheca fuliginea* but has a phytotoxic characteristic which causes more loss in the crop than powdery mildew. The use of Sulfur has a tendency to burn or spot the melon resulting in both yield and quality losses which may or may not offset the control of the fungus. In addition the odor associated with the use

of Sulfur makes it a difficult product to manage in urban areas. In agricultural areas, field harvest crews are reluctant to work in the vicinity of a recent Sulfur application. This limits the use of Sulfur near urban areas and close to harvest.

Bayleton: Bayleton has a label statement as follows: "...will not give commercially acceptable control of Sphaerotheca fuliginea..." Sphaerotheca fuliginea is recognized as the strain that causes economic loss in watermelon crops. Bayleton can only be applied 4 times in a season at its maximum rate further limiting its effectiveness.

Bravo: Bravo is phytotoxic to watermelons with heat and intense sun, as stated on the label.

Economic Effects

The following chart provides an economic profile of the watermelon crop:

YEAR	YIELD PER ACRE (TONS)	UNIT PRICE ($)	CROP VALUE ($)	PRODUCTION COST/ACRE ($)	NET REVENUE PER ACRE ($)
1991	19.5	147.00	2867.00	2470.00	397.00
1992	21.1	148.00	3123.00	2566.00	557.00
1993	17.0	119.00	2023.00	2320.00	<297.00>
1994	14.5	166.00	2407.00	2170.00	237.00
1995	18.3	145.00	2654.00	2398.00	256.00
AVERAGE FOR THE LAST 5 YEARS					
	18.1	145.00	2614.80	2384.80	230.00
ESTIMATE **WITHOUT** MATERIAL					
	13.6	108.75	1961.1	1788.6	172.5
ESTIMATE **WITH** MATERIAL					
	15.4	123.25	2222.58	2027.08	195.5

The California watermelon crop is unique in that a field can be infected with the disease yet still produce a crop. The crop is unharvestable and considered a total loss. Due to this situation, the yield figures do not provide an accurate demonstration of the severity of the disease and the extent of damage. The watermelon that remains in the field attributes to yield but is not harvestable due to sunburn and lesions.

California has both a mandatory and a voluntary watermelon standardization program regulated by federal and state agencies (**Attachment C**). Documentation of crop loss must come from a producer level since California does not have the means to generate data of crop rejection attributed to sunburn and lesions from powdery mildew.

Production Costs

Production costs for the 1995-96 growing season are estimated to be $2484.80 per acre.

Enforcement Authority

Authority to enforce provisions of this Section 18 are provided in the California Food and Agricultural Code. The County Agricultural Commissioners are given the authority to enforce all of the provisions of the Code. All Section 18 Emergency Exemptions are classified as restricted materials and a permit must be obtained from the County Agricultural Commissioner before they can be applied.

Risk Information

Use of myclobutanil under this specific exemption is not expected to result in adverse effects to human health, endangered species or threatened species, beneficial organisms or the environment. This use pattern was reviewed by our Fish and Wildlife staff. They concluded that "The intended use pattern (terrestrial) and the low toxicity profile demonstrated by the submitted studies conbined with the low application rates all indicate a low hazard potential to nontarget organisms. No hazard to wildlife and/or aquatic organisms is anticipated from the intended use of this fungicide".

The Proposed Program

The proposed program is outlined in the enclosed supplemental label (**Attachment A**). This label includes directions for use, precautions and restrictions. Residue data, by Rhom and Haas Company, was sent to U.S. EPA on August 3, 1992, (PP # 2F4155) see **Attachment D.**

The manufacturer, Rhom and Haas, has been notified of this specific exemption request and is in concurrence. In addition, the appropriate state agencies are also being notified of this specific exemption request through routine weekly notices which the Department of Pesticide Regulation distributes. Comments received after the submission of this request will be forwarded to the United States Environmental Protection Agency (USEPA).

The following people may be contacted as a knowledgeable experts:

Michael E. Matheron, Ph.D.
Extension Plant Pathologist
Rt. 1 Box 40M
Somerton, Arizona 85350
Phone: (520) 726-0458
Fax: (520) 726-1363

Mary Wilson
Wilson Ag. Consulting Services
52-300 Enterprise Way
Coachella, California 92236
Phone: (619) 398-1631
Fax: (619) 398-2990

Jose Aguiar
Farm Advisor: Vegetable Crops/Small Farms
83-612 Avenue 45, Suite 7
Indio, California 92201-8293
Phone: (619) 863-8293
Fax: (619) 775-9049

Thank you for your help with this exemption. If you should have any further questions, please contact Roberta Firoved at (916) 324-3533.

Sincerely,

James M. Yamamoto
FOR

Jerome R. Campbell
Supervisor of Registration
Pesticide Registration Branch
(916) 324-3889

Enclosures

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ATTACHMENT A

California Environmental Protection Agency
James M. Strock, *Secretary for Environmental Protection*

State of California
Pete Wilson, *Governor*

DEPARTMENT OF PESTICIDE REGULATION
James W. Wells, *Director*
1020 N Street, Room 332
Sacramento, California 95814-5624

No. 96-22

July 26, 1996

CALIFORNIA AUTHORIZATION FOR PESTICIDE USE UNDER USEPA SECTION 18 CRISIS EXEMPTION FOR DISTRIBUTION AND USE ONLY WITHIN CALIFORNIA

Pursuant to authority granted under Section 18 of the Federal Insecticide, Fungicide and Rodenticide Act and 40 CFA, Part 166, approval is granted to use the pesticide shown below to control specified emergency.

Product: Rally 40W EPA Reg. No.: 707-215-AA

Firm Name: Rohm and Haas Company

Location: Fresno, Merced, San Joaquin, Stanislaus, Sutter, Yolo, and Yuba Counties

Crop/Site/Commodity: Cucurbits

Target Pest/Problem: Powdery Mildew (*Sphaerotheca fuliginea*)

Dosage: 4.0 oz of product per acre (1.6 oz. AI per acre). Do not apply more than 1.5 pounds of product (0.6 pounds AI) per acre per season.

Dilution Rate:
Ground: 20 gallons of water
Air: 10 gallons of water

Method of Application: Ground or Air

Frequency/Timing of Applications: Begin application at first sign of disease development and continue on a 7 to 10 day application schedule. Users are limited to six applications per season based on the proposed label and the total active ingredient that may be applied annually.

Worker Safety Reentry Interval: 24 hours

Preharvest Interval: 24 hours

Effective Date: July 26, 1996

Expiration Date: July 25, 1997

Other Requirements:

1. A total of 55,000 acres will be treated.

2. Combined residues of myclobutanil resulting from applications made in accordance with the recommended/proposed label are not expected to exceed 0.5 ppm.

3. There are no feed items associated with the proposed use, so secondary residues (meats, milk, poultry, or eggs) of myclobutanil are not a concern.

All applicable directions, restrictions, and precautions on the USEPA registered label and this label must be followed.

<u>This labeling must be in the possession of the user at the time of pesticide application.</u>

Tank mixing with other compatible pesticides, spray adjuvants and fertilizers is allowed as long as all labeling and regulatory requirements are met and tank mixing is not otherwise prohibited.

The Department shall be immediately informed of any adverse effects resulting from the use of this exemption.

<u>Please note</u>: The USEPA expects concerned growers or grower groups to work toward the registration of use patterns that may be needed on a continuing basis. It will, therefore, be necessary to require applicants wishing to renew emergency exemptions to provide a progress report on residue tolerance and registration along with request for reissuance of an emergency exemption renewals.

Without substantial progress in pursuing a tolerance and registration for the use in question, it will be difficult to obtain an emergency exemption for a another season. The pesticide manufacturer or Western

Region IR-4 may be contacted regarding the initiation of a pesticide petition for residue tolerance.

A final report must be submitted by the county agricultural commissioner to Pesticide Registration, Department of Pesticide Regulation within 45 days of the expiration date of this exemption. This report must include the following information:

a. Amount of product used.
b. Units (i.e., acres, tree, cattle) treated.
c. Number of applications.
d. Estimate of effectiveness.
e. Any adverse effects noted.

Prior to use under this exemption, a permit must be obtained from the county agricultural commissioner. The permit shall state the maximum amount of acres to be treated, maximum amount of product that may applied, and dealer from which the product may be purchased. The purchaser (permittee) or purchaser's (permittee's) agent must provide the seller, or person delivering the restricted material, a copy of the permit on the date the restricted material is delivered. The dealer shall maintain a record of each sale which shall be made available to representatives of the Department of Pesticide Regulation or county agricultural commissioner upon request. Such records shall include the date of sale or delivery, permit number, identity and amount of product purchased, and the name of the purchaser.

All applications of this material shall be made by or under the supervision of a certified applicator certified for this category of pest control. If this material is a liquid Category I pesticide, all applications will be made in accordance with California closed mixing system regulations.

Agricultural pest control businesses shall submit a pesticide use report to the county agricultural commissioner within seven days of each treatment. Growers who apply this material shall submit a pesticide use report to the county agricultural commissioner by the 10th day of the month following the month in which the applications are made. The county agricultural commissioner in cooperation with the Department of Pesticide Regulation, will monitor the use of the product under this exemption and will prepare a written report describing any unusual or adverse effects attributable to this use.

This exemption does not constitute a recommendation of the Department of Pesticide Regulation and will not prevent quarantine action if illegal residues are found in or on any crop. Neither the Department nor the county agricultural commissioner, manufacturer or formulator makes any warranty of merchantability, fitness of purpose, or otherwise, expressed or implied, concerning the use of a pesticide in accordance with these provisions. The user and/or grower acknowledges

the preceding disclaimer and accepts liability for any possible damage or nonperformance resulting from this use.

James M. Hamack
FOR

Jerome R. Campbell
Supervisor of Registration
Pesticide Registration Branch
(916) 324-3889

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